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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,185	08/01/2005	Koji Hirota	1034232-000037	8290

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EXAMINER
JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
01/27/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/544,185	HIROTA ET AL.	
	Examiner	Art Unit	
	Monique R. Jackson	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,5 and 8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,5 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 10/23/08 has been entered. Claims 3 and 6 have been canceled. Claims 1, 4-5 and 8 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102/103

2. Claims 1, 4-5 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okamura et al (see US 7,338,716, English equivalent for WO02/064363) for the reasons recited in the prior office action and restated below wherein the Examiner notes that the recitation at Col. 6, lines 12-31 corresponds to tetracarboxylic acid dianhydrides utilized to make any of the polyimides taught by Okamura et al including those for layer B.

3. Okamura et al teach a laminate comprising an insulating polyimide resin layer composed of a plurality of polyimide resin layers between metal foils wherein Okamura et al cite copper and stainless steel as materials suitable for use in load beams and flexures of HDD suspensions (Col. 3, lines 1-47.) Okamura et al teach that the polyimide resin layer preferably comprises a polyimide resin layer A with a CTE of 30x10-6/°C or less and at least one polyimide resin layer B, in contact with the metal foil, preferably having a glass transition temperature of 300°C or below; the bonding strength between layer B and the metal foil is 0.5 kN/m or more; and the average rate of etching of the insulating resin layer in 50wt% aqueous solution of potassium hydroxide at 80°C is 0.5μm/min or more (Abstract.) Okamura et al teach that the polyimide resin B can be formed by reacting tetracarboxylic acid dianhydrides with diamines, wherein Okamura et al teach that it is possible to obtain good quality for etching by an aqueous alkaline

solution and a property of low thermal expansion when PMDA accounts for 60 mol% or more, more preferably 80mol% or more, of the total tetracarboxylic acid dianhydrides, and that from the standpoint of producing resins of low thermal expansion, BTDA, DSDA or TMEDA is added preferably at a rate of 50mol % or less of the total tetracarboxylic acid dianhydrides (*hence reading upon the instantly claimed tetracarboxylic acid dianhydrides*; Col. 6, lines 12-31.) Okamura et al further teach that suitable diamines include those as instantly claimed, such as BABP and APB. Though Okamura et al do not specifically teach the instantly claimed properties for the polyimide resin, the Examiner takes the position that the polyimide taught by Okamura et al produced by the same tetracarboxylic acid dianhydrides as instantly claimed in the same mole percentages as claimed, would inherently produce a polyimide resin having the instantly claimed properties. Alternatively, one having ordinary skill in the art at the time of the invention would have been motivated to select from the tetracarboxylic acid dianhydrides and diamines taught by Okamura et al, utilize routine experimentation to determine the optimum molar percentage of each to utilize within the ranges taught by Okamura et al, wherein the claimed properties would flow naturally from the teachings of Okamura et al. Further, as discussed above, Okamura et al specifically teach that the selection and amount of the claimed dianhydrides have a direct effect on the resulting polyimide, including heat resistance, thermal expansion, etching rate and peel strength, and one would be motivated to determine the optimum amount of each dianhydride to provide the desired properties for a particular end use of the laminate taught by Okamura et al.

Response to Arguments

4. Applicant's arguments filed 10/23/08 have been considered but are not persuasive. The Applicant argues that the Examiner has equated layer A of Okamura et al, which is not in contact with the metal layer, to the instantly claimed polyimide resin which comes in contact with the metal, however, the Examiner notes that the rejection was based upon polyimide layer B being the same as the instantly claimed polyimide resin in contact with the metal. The Applicant further argues that at Col. 4, lines 23-29, Okamura et al teach that the PMDA in layer B is added in an amount of preferably 80 mol% or less, more preferably 10-60mol%, of the total dianhydrides, and that this amount appears to be the upper limit of the amount of PMDA while in the instant claims, PMDA is used not less than 50 mole%. However, the Examiner first notes that these values are with regards to a particular embodiment and also notes that the disclosed ranges taught by Okamura et al even in this section noted by the Applicant, and more particularly at Col. 6, clearly encompass or overlap the claimed ranges with regards to PMDA as well as BTDA and hence reads upon the claimed invention. The Applicant also argues that the claimed amounts provide unexpected results with regards to adhesion property and etching property (Page 6 of reply) however the Applicant also states that one skilled in the art would understand that the amount of PDMA would be required to be lower in order to improve adhesiveness by low Tg (See Page 5 of reply), hence contradicting the Applicant's claim that the results are "unexpected". Further, the Applicant refers to specific examples taught by Okamura et al, all of which utilize values outside of the claimed ranges, however, the Examiner notes that these examples are non-limiting examples and the teachings of Okamura et al as a whole must be considered. Hence, the Examiner maintains her position that the invention taught by Okamura et

al anticipates, or in the alternative, renders obvious the instantly claimed invention in the absence of a clear showing of unexpected results.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
January 20, 2009